West Virginia Department of Environmental Protection
Division of Air Quality

Fact Sheet

For Final Permitting Action Under 45CSR30 and Title V of the Clean Air Act

Permit Number: **R30-08100155-2008**
Application Received: **May 7, 2007**
Plant Identification Number: **081-00155**
Permittee: **Raleigh County Solid Waste Authority**
Facility Name: **Raleigh County Sanitary Landfill**
Mailing Address: **P.O. Box 989, Beckley, WV 25802**

Physical Location:	Beckley, Raleigh County, West Virginia
UTM Coordinates:	485.50 km Easting • 4186.39 km Northing • Zone 17
Directions:	From State Route 41 near Beckley, WV, take County Route 8 (Ragland Road) to Fernandez Drive. The landfill entrance is the first road on the right off Fernandez Drive.

Facility Description

The Raleigh County Sanitary Landfill is a municipal solid waste (MSW) management facility that operates under SIC Code 4953. The landfill accepts municipal solid waste, construction and demolition debris and approved residual waste streams

Emissions Summary

Plantwide Emissions Summary [Tons per Year]		
Regulated Pollutants	**Potential Emissions**	**Actual Emissions (NA)**
Carbon Monoxide (CO)	86	
Nitrogen Oxides (NO_X)	4	
Particulate Matter (PM_{10})	45	
Total Particulate Matter (TSP)	184	
Sulfur Dioxide (SO_2)	4	
Volatile Organic Compounds (VOC)	13	
PM_{10} is a component of TSP.		
Hazardous Air Pollutants	**Potential Emissions**	**Actual Emissions (NA)**
Aggregate HAPs	9	
Regulated Pollutants other than Criteria and HAP	**Potential Emissions**	**Actual Emissions (NA)**
NMOC	55	
Some of the above HAPs may be counted as PM or VOCs.		

Non-methane organic compounds (NMOC) – The current emission rate estimate (calculated for year 2007) is 30.88 Mg/yr. The projected closure year is 2061 with a projected maximum NMOC emission rate estimate greater than 53.52* Mg/yr. The NMOC emission rate estimates were calculated using EPA's Landfill Gas Emissions Model (LandGEM) software. The values used for k and L_o were 0.050 $year^{-1}$ and 170 m^3/Mg respectively. The site specific NMOC concentration used in the model was 489 ppmv, as determined by Tier 2 testing in November 2006.

*The actual closure date exceeds LandGEM's 80-year waste acceptance limit. The landfill closure year with the 80-year limit is projected to be 2053 with NMOC emissions estimated at 53.52 Mg/yr

Title V Program Applicability Basis

This facility has a design capacity over 2.5 million megagrams and 2.5 million cubic meters. Due to this facility's design capacity the Raleigh County Sanitary Landfill is required to have an operating permit pursuant to Title V of the Federal Clean Air Act as amended and 45CSR30.

Legal and Factual Basis for Permit Conditions

The State and Federally-enforceable conditions of the Title V Operating Permits are based upon the requirements of the State of West Virginia Operating Permit Rule 45CSR30 for the purposes of Title V of the Federal Clean Air Act and the underlying applicable requirements in other state and federal rules.

This facility has been found to be subject to the following applicable rules:

Federal and State:

45CSR6	To Prevent And Control Air Pollution From Combustion of Refuse.
45CSR11	Standby plans for emergency episodes.
45CSR13	Permits For Construction, Modification, Relocation and Operation of Stationary Sources
45CSR16	Standards Of Performance For New Stationary Sources Pursuant To 40 CFR Part 60
45CSR17	To Prevent And Control Particulate Matter Air Pollution From Materials Handling, Preparation, Storage And Other Sources Of Fugitive Particulate Matter
45CSR23	To Prevent And Control Emissions From Municipal Solid Waste Landfills
WV Code § 22-5-4 (a) (14)	The Secretary can request any pertinent information such as annual emission inventory reporting.
45CSR30	Operating permit requirement.
40 C.F.R. Part 60, Subpart WWW	Standards of Performance for Municipal Solid Waste Landfills
40 C.F.R. Part 61	Asbestos inspection and removal
40 C.F.R. Part 82, Subpart F	Ozone depleting substances

State Only:

45CSR4	No objectionable odors.

Each State and Federally-enforceable condition of the draft Title V Operating Permit references the specific relevant requirements of 45CSR30 or the applicable requirement upon which it is based. Any condition of the draft Title V permit that is enforceable by the State but is not Federally-enforceable is identified in the draft Title V permit as such.

The Secretary's authority to require standards under 40 C.F.R. Part 60 (NSPS), 40 C.F.R. Part 61 (NESHAPs), and 40 C.F.R. Part 63 (NESHAPs MACT) is provided in West Virginia Code §§ 22-5-1 *et seq.*, 45CSR16, 45CSR15, 45CSR34 and 45CSR30.

Active Permits/Consent Orders

Permit or Consent Order Number	Date of Issuance	Permit Determinations or Amendments That Affect the Permit *(if any)*
R13-2671A	December 6, 2007	

Conditions from this facility's Rule 13 permit(s) governing construction-related specifications and timing requirements will not be included in the Title V Operating Permit but will remain independently enforceable under the applicable Rule 13 permit(s). All other conditions from this facility's Rule 13 permit(s) governing the source's operation and compliance have been incorporated into this Title V permit in accordance with the "General Requirement Comparison Table B," which may be downloaded from DAQ's website.

Determinations and Justifications

1. 45CSR6 - *To Prevent And Control Air Pollution From Combustion of Refuse.*

   This rule defines the flares as incinerators and sets the following limits:

   ¬ The particulate matter limit for each passive flare (01C-30C) is calculated to be 0.59 lb/hr as described herein;

   - The particulate matter emission limit from each flare is determined by the following formula:

     PM Emissions (lb/hr) = F x Incinerator Capacity (tons/hr)

     Where: F = 5.43 (*from 45CSR§6-4.1*)
     Incinerator Capacity = 0.108 tons/hr (*see below)*

     The Volumetric design flow for each flare is 50 SCFM. To convert volumetric flow to mass flow, the density of the landfill gas is needed. The landfill gas is assumed to be 50% methane and 50% carbon dioxide. Using 0.67908 kg/m^3 (@ 60 ^{o}F & 14.7 psia) for the density of Methane and 1.8696 kg/m^3 (@ 60 ^{o}F & 14.7 psia) for the density of Carbon Monoxide, the estimated density of the landfill gas is 1.27434 kg/m^3. Using *Katmar Software's* "Uconeer - Units Conversion for Engineers" program, the volumetric flow rate of 50 SCFM is converted to a mass flow rate of 0.108 tons/hr.

     ◊ These flares will intermittently and automatically burn landfill gas whenever the gas is present. Given the fact that no visible emissions are allowed from these flares and that the particulate matter emissions would be considered insignificant, a compliance demonstration will not be required.

   ¬ The particulate matter limit for the active gas collection flare (31C) is calculated to be 14.11 lb/hr as described herein;

   - The particulate matter emission limit from active gas collection flare is determined by the following formula:

     PM Emissions (lb/hr) = F x Incinerator Capacity (tons/hr)

     Where: F = 5.43 (*from 45CSR§6-4.1*)
     Incinerator Capacity = 2.598 tons/hr (*see below)*

     The Volumetric design flow for flare 31C is 1200 SCFM. As described above and using *Katmar Software's* "Uconeer - Units Conversion for Engineers" program, the volumetric flow rate of 1200 SCFM is converted to a mass flow rate of 2.598 tons/hr.

     ◊ Given the fact that no visible emissions are allowed from this flare and that the particulate matter emissions would be considered insignificant a compliance demonstration will not be required.

   ¬ The visible emission limit from 45CSR§6-4.3. for each flare is 20% opacity with the exception to smoke which is less than forty (40%) percent opacity, for a period or periods aggregating no more than eight (8) minutes per start-up. However, the permit R13-2671A requirement of no visible emissions is more stringent and therefore the Rule 6 limit will be streamlined with the Rule 13 permit requirement.

     ◊ Compliance will be demonstrated through visible emission checks and record keeping

¬ Additionally, this rule prohibits from the flares, the emission of particles of unburned or partially burned refuse or ash which are large enough to be individually distinguished in the open air. The rule requires the flares, including all associated equipment and grounds, be designed, operated and maintained so as to prevent the emission of objectionable odors, and also requires an NSR permit for the construction, modification or relocation of any incinerator.

◊ Compliance will be demonstrated through visible emission checks and record keeping

2. 45CSR17 – *To Prevent and Control Particulate Matter Air Pollution from Materials Handling, Preparation, Storage and Other Sources of Fugitive Particulate Matter.*

¬ This rule sets a standard for fugitive particulate matter, which is not to be discharged beyond the facility boundary lines which causes statutory air pollution.

- If the Director finds the facility in violation of this rule, compliance with this standard will be met by the facility submitting a control plan.

3. 45CSR13-Permit R13-2671A

¬ Condition 4.3.1 of R13-2671A references opacity requirements of condition 4.1.2.d. The correct reference should be condition 4.1.1.c. Therefore the corresponding Title V permit condition (i.e., 4.3.1.) references 4.1.1.c.

¬ Condition 4.1.2.e. of R13-2671A is identical to 4.1.2.a. Therefore, 4.1.2.e. has been deleted in the Title V permit and subsequent references to 4.1.2.e. have been changed to 4.1.2.a.

¬ Condition 4.2.1 of R13-2671A references 4.1.2.e. (See bullet above)

¬ Condition 4.4.4 of R13-2671A references compliance with condition 4.1.2.d. and 4.2.2. The correct references should be conditions 4.1.2.a. and 4.2.1. Therefore the corresponding Title V permit condition (i.e., 4.4.3.) references 4.1.2.a. and 4.2.1.

4. 40 C.F.R. 60, Subpart WWW – *Standards of Performance for Municipal Solid Waste Landfills*, and 45CSR23 – *To Prevent and Control Emissions from Municipal Solid Waste Landfills*

¬ These rules set standards based on design capacity and nonmethane organic compounds (NMOC). To demonstrate compliance with these rules, the facility is required to submit an amended design capacity report to the Director upon any change that increases the permitted area or depth, or change in operating procedures, or other means which results in an increase in the maximum design capacity. Also, the facility will maintain records of all emission data and operating parameters necessary to show compliance. If necessary the facility will demonstrate compliance by submitting a landfill gas collection and control system design plan. The facility will also demonstrate compliance by submitting an initial NMOC emission report, annual NMOC emission report, 5-year NMOC report, revision of 5-year NMOC report, and/or closure report, where applicable.

- Since the design capacity is greater than 2.5 Mg, amended design capacity reports under 40 CFR §60.757(a)(3) are not required. Therefore, the current design capacity and the requirement to report an amended design capacity will not be included in the "Source Specific Requirements" section of the Title V permit.

¬ The emission rate from nonmethane organic compounds (NMOC) has been calculated to be less than 50 megagrams per year using the Tier 2 methodology. Therefore the installation of a

collection and control system is not required and the NSPS requirements applicable to such a system have not been included in the permit. The facility has elected to voluntarily install a collection and control (i.e., a flare) system and has received a construction permit (R13-2671A) from the WVDAQ. Once the NMOC emission rate is equal to or greater than 50 megagrams per year, triggering the need to install a landfill collection and control system that meets the requirements of Subpart WWW based on 40 C.F.R. §60.754(a) and §60,752(b)(2) [see permit conditions 5.1.1., 5.1.2., 5.1.3. & 5.1.4.], the facility shall submit a Title V permit modification application in order to incorporate the 40 C.F.R. Subpart WWW requirements applicable to such collection and control system.

5. 40 C.F.R. 60, Subpart Kb - *Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification.*

¬ The two leachate tanks each have a capacity greater than 75 cubic meters (m^3) and commenced construction after July 23, 1984. The leachate is composed primarily of water and contains trace amounts of volatile organic liquids (VOL). The vapor pressure of the VOL stored in the tanks is expected to be well below 3.5 kPa. An example of this low vapor pressure is reflected in EPA Region 4's Applicability Determination Index (API) determination in 1994 for leachate tanks that had a VOL vapor pressure of only 6.37 $x10^{-4}$ kPa. At the time of the determination, the tanks in the API were only subject to the record keeping of tank dimensions and capacity analysis of Subpart Kb. This subpart has since been amended and does not apply to tanks storing VOL with a true vapor pressure less than 3.5 kPa. Therefore, 40 C.F.R. 60, Subpart Kb is considered to be non-applicable to the leachate tanks for this facility.

Non-Applicability Determinations

The following requirements have been determined not to be applicable to the subject facility due to the following:

40 C.F.R. §60.757 (a)(3)	The design capacity of this facility is greater than 2.5 million megagrams and 2.5 million cubic meters. Therefore, amended design capacity reports are not required. [**40 C.F.R. §60.752 (a)]**
40 C.F.R. Part 64	The facility does not have any pollutant specific emissions units (PSEU) at this facility that satisfy all of the applicability criteria requirements of 40 CFR §64.2(a). [(1) have pre-control regulated pollutant potential emissions (PTE) equal to or greater than the "major" threshold limits to be classified as a major source; 2) are subject to an emission limitation or standard and; 3) have a control device to achieve compliance with such emission limitation or standard.] Therefore, the facility is not subject to the Compliance Assurance Monitoring (CAM) rule.
40 C.F.R. Part 63 Subpart AAAA	National Emission Standards for Hazardous Air Pollutants: Municipal Solid Waste Landfills. This facility is not subject to 40 C.F.R. Part 63 Subpart AAAA since the facility is not a major source of HAPs, nor is it is collocated with a major source, nor is it an area source landfill that has a design capacity equal to or greater than 2.5 million megagrams (Mg) and 2.5 million cubic meters (m^3) and has estimated uncontrolled emissions equal to or greater than 50 megagrams per year (Mg/yr) NMOC.
40 C.F.R. §61.154	The facility does not receive asbestos-containing waste material from sources covered under 40 C.F.R. §61.149, §61.150, or §61.155.
40 C.F.R. 60 Subpart Kb	The Leachate Tanks VOL vapor pressures are less than 3.5 kPa

Request for Variances or Alternatives

None.

Insignificant Activities

Insignificant emission unit(s) and activities are identified in the Title V application.

Comment Period

Beginning Date: March 17, 2008
Ending Date: April 16, 2008

All written comments should be addressed to the following individual and office:

Frederick Tipane
Title V Permit Writer
West Virginia Department of Environmental Protection
Division of Air Quality
601 57th Street SE
Charleston, WV 25304

Procedure for Requesting Public Hearing

During the public comment period, any interested person may submit written comments on the draft permit and may request a public hearing, if no public hearing has already been scheduled. A request for public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing. The Secretary shall grant such a request for a hearing if he/she concludes that a public hearing is appropriate. Any public hearing shall be held in the general area in which the facility is located.

Point of Contact

Frederick Tipane
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Division of Air Quality
601 57th Street SE
Charleston, WV 25304
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Response to Comments (Statement of Basis)

Comments received from the USEPA resulted in:

Replacing the NMOC 2008 estimated emissions in the Emissions Summary table of the Fact Sheet with the 2007 emissions. The 2007 emissions are the latest emissions that were required to be reported.

Adding "and 2.5 million cubic meters" to the "Title V Program Applicability Basis" section of the Fact Sheet because applicability to Subpart WWW is based on landfill mass and volume.

Revising the language under the second arrow bullet of Item 4 in the "Determinations and Justifications" section of the Fact Sheet The language was revised in order to clarify that once the NMOC emission rate is equal to or greater than 50 megagrams per year triggering the need to install a landfill collection and control system, such a system must meet the requirements of Subpart WWW based on 40 C.F.R. §60.754(a) and §60,752(b)(2) and the related Title V permit provisions of sections 5.1.1., 5.1.2., 5.1.3. & 5.1.4.